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ABSTRACT

Worker displacement is a priority human resource issue that must be resolved to improve economic productivity, to further revitalize the American economy, and to cope with growing international competition. The work force and work place of the 1980s are undergoing changes that could result in ever larger scale joblessness. These changes include technological changes, change from a goods producing to a service economy, geographical shift of business, mismatch of graduates to job openings, population changes, and increase of women in the labor force. National economic policies associated with human resource development that have contributed to the imbalance between worker supply and demand are minimum wage, full employment, and investment credit. Bringing education into better alignment with the work place is the priority need in reducing worker displacement. Human resources development can be improved through a comprehensive career education and vocational training program. New approaches to reducing worker displacement should be aimed at meeting employer and worker needs through improved cooperation between industry and the schools. The occupational planning process must be improved; the response to local worker displacement should be decentralized; and workers should develop transferable skills. (YLB)

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Information Series No. 255

DISPLACED WORKERS: A CHALLENGE FOR VOC ED

written by

Donald M. Clark
National Association for Industry-Education Cooperation

U.S. DEPARTMENT OF EDUCATION
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FOREWORD

Workers, displaced by changes in the work environment and some shortsighted human resource policies, constitute a growing problem for the American economy. This paper, *Displaced Workers: A Challenge for Voc Ed*, examines the problem of involuntarily displaced workers and details the ways that industry and vocational education can improve their joint retraining efforts. It is an information document for vocational educators and administrators who are responsible for planning and directing vocational programs that will serve the displaced worker population.

This paper is one of ten interpretive papers produced during the fifth year of the National Center's knowledge transformation program. The review and synthesis in each topic area is intended to communicate knowledge and suggest applications.

The profession is indebted to Dr. Donald M. Clark for the preparation of this paper. Dr. Clark is President of the National Association for Industry-Education Cooperation. He is internationally recognized for his work in furthering industry-education cooperation, and has authored numerous publications and articles on industry-education coordination at the postsecondary level.

Dr. John Crites of Kent State University, Madeleine Hennings of the United States Chamber of Commerce, Carol Hodgson of the Indiana State Board of Vocational and Technical Education, Dr. Robert Nelson of the University of Illinois, and Dr. William Ashley and Dr. Pat Winkfield of the National Center for Research in Vocational Education contributed to the development of the paper through their critical review of the manuscript. Staff on the project included Joan Blank, Alta Moser, Dr. Ann Nunez, Dr. Judith Samuelson, and Dr. Jay Smink. Claire Brooks and Ruth Nunley typed the manuscript, and Janet Ray served as word processor operator. Editorial assistance was provided by Janet Kiplinger of the National Center staff.

Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

EXECUTIVE SUMMARY

This study examines the problem of involuntarily displaced workers who are unemployed due to structural changes in the economy and are not likely to regain employment easily, either at their previous jobs or elsewhere. Worker displacement is a priority human resource issue that must be resolved to improve economic productivity, further revitalize the American economy, and cope with the growing international competition.

This paper details the ways in which industry and vocational education, in particular, can improve their joint efforts in retraining dislocated workers for long-term productive work during this restructuring period of the U.S. economy. Central to this research effort is the proposition that there is a significant correlation between the extent of worker displacement and the degree of coordination between vocational/academic education and the employment community.

The analysis of worker dislocation will focus on (1) the changing contours of the work place and its effect on worker displacement, (2) those national human resource policies that have contributed to this structural problem (i.e., the imbalance between worker supply and demand), (3) the state of the art on vocational education's and the employment and training sector's efforts to address worker displacement, and (4) new approaches to human resource and economic development aimed at meeting employer and worker needs through improved cooperation between industry and the schools.

The review of the literature attests to the fragmented, uncoordinated, and duplicative approaches to dealing with displaced workers reflected in federal employment policy and industry-education interaction. Billions of dollars have been allocated for government-sponsored employment and training programs that, for the most part, lack the mechanisms for successful planning and implementation, and are conducted with little, if any, thought given to the relationship among them.

This paper maintains that the displaced worker issue is primarily a long-term structural problem, which requires a new look at human resource development policy and increased private sector involvement. Further, in order to reduce the imbalance between the supply and demand in the labor market, a central, comprehensive, coherent, cost-effective coordinating mechanism such as an industry-education council should be established. It would create an infrastructure through which employers could find the skilled labor they need, and dislocated workers could secure the occupational and employability skills needed to return to the job market.

INTRODUCTION

Purpose

The institution called "work" has a long history as a central activity in the lives of most people. Work has been recognized as a responsibility and a necessity, a major vehicle for positioning individuals in society, and for allocating social status and power. Yet, most workers in the United States traditionally have been left to fend for themselves when new technology or a downturn in the economy has affected or eliminated their jobs. Within our currently unemployed labor force, there is a segment referred to as "displaced workers." In spite of an upturn in the business cycle, this involuntarily unemployed group will continue to be confronted with significant obstacles to reentering the work force due to the structural changes in our economy.

We live in a period of great economic change, one in which the central theme is productivity, or more colorfully, reindustrialization. The United States is rapidly shifting from a mass industrial society to an information society, and the outcome is expected to be more profound than the nineteenth century shift from an agricultural society to an industrial society. Changes in both the number of people in specific occupations and the contents of occupational activities will increase the number of displaced workers as a result of the continued shrinkage of basic industries, the rapid introduction of new technology over the next twenty years, and competition from foreign imports. These displaced workers will, most likely, face extended periods of unemployment.

Considerable attention has been devoted to the redefinition of the displaced worker problem along with growing rhetoric associated with this public policy issue. A review of the literature during the past two decades, in particular, reflects a consistent expression of concern for displaced workers. Solutions to the problem, proposed primarily by researchers and public policymakers, have been too broad to provide substantial relief to date.

This paper, on the other hand, offers specific approaches to addressing the displaced workers' problem by focusing on what is required to bring the major human resource delivery system—the schools—and the employment community together in improving the alignment of our human supply and demand resources. Central to this study is the proposition that there is a correlation between the extent of worker displacement and the lack of cooperation and coordination between vocational/academic education and the employment community (i.e., business, labor, government, and the professions). There is a need for a clearer understanding of the connection between vocational education, in particular, and the economy, in general, in resolving the structural imbalance in the labor market that has displaced U.S. workers.

The analysis of worker displacement will concentrate on four areas: (1) the changing contours of the postindustrial work place that cause the displacement of workers; (2) those national human resource policies that have contributed to this structural problem (i.e., the imbalance between worker supply and demand); (3) the state of the art on vocational and academic education's and the employment and training sector's efforts to address worker displacement; and (4) new approaches to human resource and economic development aimed at meeting employer and worker needs.

Background

Nearly every American leader is calling for reindustrialization of our nation—that is, revitalizing the U.S. economy by modernizing our industrial base to make it more efficient and competitive. The auto, steel, and rubber industries are only the ones most visibly in trouble. But other industries such as industrial motors and apparel are also suffering at this time, and still others are likely to come under increased pressure in the years ahead.

Economists and politicians, awakening to the problem, are emphasizing a policy that "would deal with specific industries needing aid or encouragement as opposed to economic planning, which would set targets for the whole economy, including production, prices and employment" (Hershman and Lavenson 1980). This industrial policy will need defining and refining; for it is destined to be a major and highly controversial preoccupation of government, labor, business, and education during the next few years.

The policy's general objectives, which approach motherhood or at least apple pie in their potential universal acceptability, are restoring sustained economic growth; achieving long-term price stability; strengthening international competitiveness; and reaching full employment (Eberle and Moller 1973). The objectives indicate where we want to go; the debate will center on how we get there.

Among the most pressing problems confronting the formulation of U.S. economic policy is that of displaced workers. Displaced workers are jobless due to plant closings that eliminated their positions, or automation that replaced people with labor-saving equipment. There is a wide disparity in interpreting the size of the unemployed work force regarded as dislocated (e.g., it has been estimated to be 1 to 20 percent of the unemployed). The impossibility of knowing its exact size poses a further difficulty in determining who would warrant whatever assistance the federal government made available to displaced workers. Thus, the problem of displaced workers extends to a number of areas.

It is useful at this point to distinguish between two meanings of the term "reindustrialization" as it relates to worker dislocation. Management and union leaders in old-time manufacturing industries are seeking policies that will maintain traditional blue-collar employment, more specifically, jobs for semiskilled machine operators in traditional mass production industries. However, in all highly developed industrial countries the broader context of reindustrialization is "the restoration of international competition through production and export of manufactured goods" (Drucker 1980). The only way a developed economy such as the United States is to regain its international competitiveness, however, is to encourage a significant reduction of traditional blue-collar employment. "The U.S. is well launched on the voyage from the industrial age into the information age" (Main 1982), a transition that is moving labor massively out of manual work into "knowledge work".

This demographic shift highlights the growing displacement in the work force. Yet, to maintain competitive strength and leadership in the international economic arena, the United States will need to gear its manufacturing technology to the available supply of knowledge workers rather than to the supply of blue-collar workers. Many of the new jobs will go to individuals with the right skills for the information age—programmers, systems analysts, word processor operators, office-machine maintenance workers, for example. Those workers without the skills in demand face a bleak future in the new service economy. Thus, the retraining of workers is emerging as a major issue for the federal government.

The United States has become heavily dependent on the world economy. Further, its ability to dictate the course of world economic activities has declined sharply. This nation is caught in a scissors movement, that is, "on the one hand, the growing importance of both exports and imports increases pressure on the U.S. to pursue a liberal trade and international investment policy. On the other hand, the growing penetration of its economy by foreign goods often increases the pressure to retreat from open approaches to international exchange" (Bergsten 1982, p. 11).

Foreign penetration of our markets has displaced workers. An American automobile in a dealer's showroom represents not only the output of the Detroit production workers, but the effort of a broad chain of industries and employees. "And when imports crimp sales of domestic automakers, jobs are lost in a broad spectrum of businesses—from steel to finance and farming" ("How Auto Imports" 1982, p. 81).

We are now a truly global economy that reflects a worldwide process of redistribution of labor and production. As part of this process, all of the developed countries are reindustrializing. "While economic matters will dominate the eighties with specific headlines centering upon energy, inflation, unemployment, the relative U.S. decline militarily, politically, and economically, as well as monetary and fiscal policy, underlying all of these is our ability to obtain more output per unit of input—that is, productivity" (Wilson 1981, p. 9).

Traditionally, the United States has been recognized as the world's leader in technological innovation and production methods. However, there has been a decline in productivity growth in this country since 1973. Productivity "is the ratio of measured output to measured input. Imputs can be stated in hours worked, dollars invested, materials used, or energy consumed. Outputs can be measured in gross production, quantity or dollar value, value added in dollars, sales in units or dollars, or weight or volume" (Milbergs 1982, p. 20). Thus, it is a statistical measure of how efficiently firms use labor, capital, and a range of other resources to produce goods and services. Productivity gains are our best weapon against the growing problem of displaced workers.

A significant number of United States jobs have been lost to foreign markets. In recent years, Japanese and German manufacturers have made extraordinary gains in productivity, while many other nations have been experiencing only marginal gains, or even losses. Various studies have attributed much of the success of the Germans and particularly the Japanese in making gains in productivity to their attitude toward their jobs and employers, as well as the important role of jobs in the daily lives of workers.

In seeking productivity improvement, the United States is confronted with "changes in the demographic composition of the labor force, changes in work environment, changes in cultural values, and changes in economic and political policies" (Kalleberg 1982, p. 81) as well as with the realities of ruthless global competition with foreign producers who have more modern and fully automated facilities. Raising the issue of productivity growth in the United States also raises the issue of the effectiveness of our human resources development policy.

Productivity studies have pointed out that human resources contribute between 10 and 25 percent to productivity improvement. Yet, the growing shortage of trained personnel in certain critical skill areas and the increasing numbers of adult Americans who are functionally illiterate are formidable obstacles to productivity growth and require priority attention.

Vocational education, as a productivity-oriented activity, has a key role to play in the revitalization of the American economy. It optimally teaches youth and adults the skills that lead

to the production of greater quantities of goods per hour of labor, to increased quality of output, to the knowledge of how to use natural resources more efficiently with less waste damage to the environment, and to knowledge of how to apply labor and technology more efficiently and effectively. These improvements produce gains in productivity—production increases without additional increases in costs. However, the curricula of the vocational education delivery system will need significant upgrading in order to deal effectively with worker displacement.

Industry-education cooperation—planned, organized, implemented, and evaluated in a systematic, cost-effective manner—can significantly reduce the problem of displaced workers over the long term. This will require a public/private partnership aimed at providing skill training and productive jobs for the structurally unemployed and underemployed and special groups (e.g., minorities, handicapped) and fostering a better transition from school to work, in general, for all students.

A public (education) and private (employment community) partnership has two dimensions: the policy dimension in which the goals of an initiative designed to improve skill training and upgrade the regular work force are articulated, and the operational dimension, in which these goals are pursued. The structure and processes for implementing this type of partnership between the two sectors will be discussed under new approaches to the problem of displaced workers.

Employability development and job training are integral components of economic development. Displaced workers are a drag on the economy. There is a need for systematic efforts to strengthen a community's infrastructure for cooperation between public/postsecondary education—vocational education in particular—and the private/public employment sector.

A MACROVIEW OF THE CHANGING MARKETPLACE AND WORKER DISPLACEMENT

The work force and the work place of the 1980s are undergoing change that promises to continue and accelerate into the twenty-first century. During this period of great economic change, sluggish growth and downturns in some U.S. industries have already displaced many workers, and technological advances and automation could result in larger scale joblessness than has occurred at any point in our history.

It is clear that the future work force will be composed of fewer young people, more minorities, more women, and a greater number of workers in the twenty-two- to forty-four-year-old age group. Demographic trends indicate that there may also be more older workers. However, "despite great variations within groups, the work force will be better educated, less orthodox in attitude, and more demanding of employers in terms of both psychic and financial rewards" (Kerr and Rosow 1978, p. 1).

The regional split between Sun Belt and Frost Belt, which is accelerating, will leave the northern half of the United States in serious difficulty during the next decade. Further, the rapid growth of a permanent underclass in America will contribute to the dislocation of workers as the residents of central-city ghettos, undereducated and underskilled, are left without real hope of participating in the future economic development of the country.

Bringing the changing marketplace into better alignment with our major human resource delivery system—education—and the employment and training sector, presents a rare challenge and rare opportunity in resolving worker displacement in an era of stagflation and increasing conservative hiring practices in the private sector.

Given this general profile of powerful trends emerging in the nation, a more detailed examination of changes occurring in the work place and work force in the 1980s will provide vocational educators and employment and training personnel with a baseline required for planning and implementing programs designed to reduce significantly the number of displaced workers.

Technological Changes

What occurs in the next decade or two will change the way Americans work as much as the industrial revolution did in the nineteenth century. Experts say that the new technologies, based on the computer and micro-electronics, will pose as fundamental a shift in the U.S. work place as the move from an agrarian to a manufacturing economy did a century or more ago. As the new technologies are installed to improve productivity and labor costs, there will be a growing concern about whether the nation will create the number of jobs it needs, in regions where they are most needed, and at wage levels to which many workers have been accustomed.

These developments are expected to lead to sigificant change for many workers "Advancing technological changes cause new jobs to be created and other jobs to become obsolete" (Leach 1980, p. 741). Workers who are laid off due to obsolescence will require job-related training to reenter the work force. Yet, rapid technological changes complicate training of new employees and put added pressure on the capabilities of skilled workers. The issue is not whether we will see technological change, but what the rate and dimension of that change will be, and who will benefit and who will lose. This problem must be confronted today, not in 1990.

These enormous changes in the work place are occurring concurrently with a high level of unemployment. However, even after economic recovery takes hold, millions of manufacturing jobs in the basic industries (e.g., automobiles, steel, and rubber) will disappear because of automation and foreign competition.

One view holds that dire consequences lie ahead similar to the upheaval at the beginning of the industrial age in the nineteenth century. There are predictions that the new technology will radically change what will be required of workers and will contribute to structural unemployment and, in turn, worker displacement. Other authorities, however, expect the transition to go forward with little economic disruption, as was the case in the period when the United States entered the age of automation in the early 1950s.

In the meantime, "millions of new jobs will be created, mostly in information systems, but they will be so different that today's laid-off workers will be hard pressed to fill them" (Main 1982, p. 58). The net outcome of this development will be more jobs at higher wages; but getting there will be painful for many Americans, particularly the displaced worker. In the meantime, as society becomes more and more automated, unemployment will become structural.

U.S. companies have been integrating computers and robots into their operations for years. Banks, for example, have installed automated check processing over a long period of time, and many plants use computer-controlled robot welders. At this point, there is a trend toward companies integrating office and factory systems with hierarchies of computers and robots. Yet, these are stand-alone systems that have been designed to replace single functions, without a significant impact to date.

In Japan, a robot revolution is underway, replacing humans in scores of plants. While the United States has only a few thousand robots today, the number is expected to reach an estimated one hundred thousand by 1990. The broader application of computers, robots, and electronic work stations will, over the next five-to-fifteen-year period, have profound and dramatic changes in factories and many service operations and revolutionize work in America.

In the past, an expanding economy seemed to provide jobs for workers displaced by technological improvements. However, today's economy is stagnant, and unemployment in many basic industries is at the highest level since 1941. As these industries restructure themselves to become more competitive, they will utilize new technologies. There is a concern that many workers now laid off will not be rehired, and we may further experience the demise of the industries in which they once found employment.

The efficiency of our market economy is measured by productivity, and technology is the basis of increasod productivity. However, the rate of productivity growth has been on the decline since 1965, as is evident in the following data: 1950-1965 (3 percent), 1965-1973 (2.4 percent) and 1973-1980 (0.6 percent). In 1978, the United States experienced a negative rate of productivity improvement (Clark 1976, p. 183).

Thus, the United States has a formidable productivity improvement challenge to meet, and yet, unlike other nations, it is seemingly unable to produce a sufficient supply of technically educated people. The high-technology industries, in particular, are people-poor. There are not enough technically trained people to meet the requirements of these industries. Innovation and productivity suffer. "The effect causes serious, long term implications by narrowing the 'technology gap' between the U.S. and international competitors" (Henderson 1982, p. 2). As the work place undergoes a shift, emphasizing the importance of the new technologies and human resources, public and postsecondary education must respond to the need for adequately trained personnel. Vocational education, in particular, must keep pace with the changing technology if it is to play a role in U.S. economic revitalization.

Change from a Goods Producing to a Service Economy

Shortly after the turn of the century, only three in every ten workers in the nation were employed in the service sector, and seven out of ten were engaged in the production of goods. By 1950, there was an approximate balance between the two sectors. In 1968, six out of ten workers were in service industries; and by 1980, the U.S. work force reflected the exact reversal of the 1900 breakdown, with seven in every ten workers employed in services such as government, transportation, retail and wholesale trade, finance, public utilities, real estate, and health.

Occupational employment responds to the growth rate of industries where occupations are concentrated. In 1980, for example, "85 percent of all white collar workers and over 97 percent of all service workers were employed in the service-producing industries. On the other hand, 60 percent of all blue-collar workers were employed in the goods-producing industries" (U.S. Department of Labor 1982, p. 2) such as agriculture, manufacturing, mining, and construction.

Our material-based economy is shifting toward a communication, information, and knowledge-based work place. Although the materials for production are becoming more costly, the "information bits" are becoming cheaper. Prior to the twentieth century, we were primarily an agrarian economy; between 1900 and 1955, factory workers were the dominant group in the industrial economy; and in the decade of the 1980s, the majority of employees are and will continue to be information workers.

Employment in goods-producing industries is expected to grow at only three-fourths the rate of total employment growth. By 1990, more than 33 million people will have jobs in producing goods. Conversely, the services sector will grow faster than total employment growth with 883 million workers involved in the service industries in 1990.

"Although some of the manufacturing industries now declining may eventually recover and expand employment somewhat, this process is likely to be slow" (Congressional Budget Office 1982, p. 8). The antiquated plants and equipment and growing foreign competition have combined to restrict the growth of employment in traditional manufacturing to rates well below the job growth in our economy as a whole, thereby contributing to worker displacement.

In contrast to the traditional manufacturing sector, a significant increase in employment in energy and related industries has occurred, a trend that is expected to continue. The high technology industries boom is also expected to be sustained through the 1980s, particularly in microelectronic technology applied to the computer, communication, and biotechnology fields.

Within the service sector, the fastest growing sector during this decade will be retail trade; business and health services will maintain a strong growth in employment; and growth in government jobs is expected to taper off in the last half of the decade.

Table 1 presents a summary of employment trends in the goods-producing and service sectors to 1990.

Another dimension of the divergent growth trends in different economic sectors is the serious skills shortage problem. "Between 1963 and 1975, the U.S. dropped from second to seventh place among industrial nations in the "measured skills endowments" of its labor force" (National Association of Manufacturers 1982, p. 1). In the industries that are thriving and likeliest to grow, employment is expected to expand accordingly; yet, some of these stronger industries have begun to experience shortages of highly trained workers.

The blue-collar workers from traditional manufacturing industries—already a predominant group among the displaced—do not, for the most part, have the skills required in the growth industries. Thus, we are witnessing the development of a mismatch between the type of workers available and type of workers in demand.

Geographic Shift of Business

The displacement of workers has been furthered by a geographic shift of business activity from the Frost Belt states of the Northeast and Midwest to the Sun Belt (i.e., the fourteen states and part of a fifteenth stretching across the southern third of the nation from Virginia and North Carolina to southern California. As Breckenfeld (1971) puts it succinctly, "it remains broadly true that the Sunbelt is thriving and its extraordinary growth is reshaping the demographic and economic map of the nation" (p. 133).

The Sun Belt's growth has been shaped by significant technological changes. Air conditioning has made the summers endurable, even in the deepest South. Television, jet planes and airports, and the interstate highways have ended the isolation of small-town life. As new markets have sprung up, the region has begun to attract a broad array of industries—from manufacturing to all of its financial, advertising, printing, wholesaling, and other support services. This rapid growth of taxable economic activity has assured the Sun Belt of adequate revenues for maintaining public services without increasing tax rates.

The road network in the region has enabled industry to expand far into the rural areas, providing factory work for farmers who can barely subsist on what they grow. Some southern and western states in the Sun Belt are the main beneficiaries of such rapid growth industries as energy and electronics.

At the same time, the Frost Belt states have been affected by the slow growth or downturn in the basic goods-producing sector and the resultant decline in tax base. "Continued economic decline and fiscal crisis is likely for cities and states of the industrial North" ("The Second War" 1976, P. 94). As companies and people recognize this, the desire to relocate intensifies. The shift of business to the Sun Belt is reflected in the fact that one out of six jobs today is located in California, Texas, or Florida. Further, six out of ten individuals at this time reside in the state in which they were born; the ratio was eight out of ten in 1900.

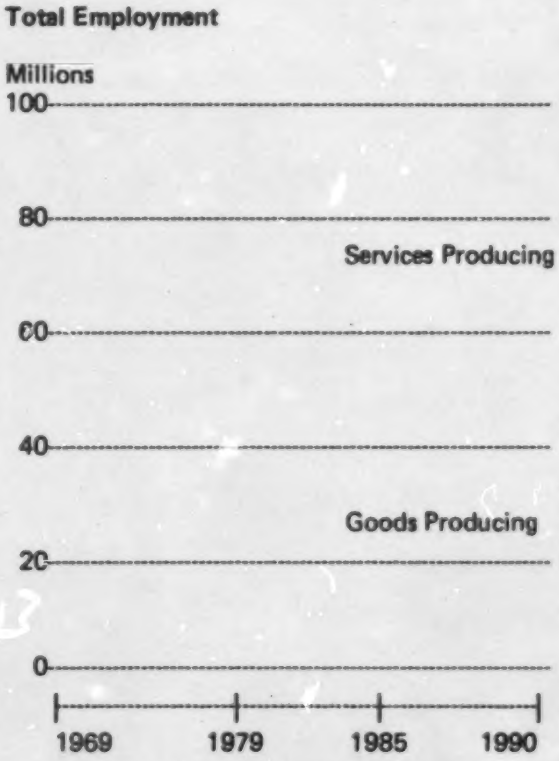
The current influx of some high-technology industries and defense plants into New England will not offset the loss of people and jobs in other traditional manufacturing industries.

TABLE 1

EMPLOYMENT TRENDS IN GOODS-PRODUCING AND SERVICE SECTORS

Employment By Major Sector (Millions)	1969	1979	1985	1990
Total Employed	86.3	104.1	113.8	122.0
Government	14.8	16.5	17.6	18.1
Agriculture	3.5	2.8	2.6	2.3
Mining	.5	.7	.9	1.0
Contract Construction	4.4	5.9	6.7	6.9
Manufacturing	20.5	21.4	22.6	23.5
Durable	12.0	13.0	13.8	14.6
Nondurable	8.4	8.4	8.8	8.9
Transportation	2.9	3.3	3.5	3.7
Communications	1.1	1.3	1.4	1.5
Public Utilities	.8	.9	1.0	1.0
Wholesale and Retail Trade	16.7	22.4	24.9	27.0
Finance, Insurance, and Real Estate	3.9	5.5	6.1	7.0
Other Services	13.7	20.2	23.2	26.6
Government Enterprises	1.3	1.4	1.6	1.8
Private Households	2.3	1.7	1.6	1.6

SOURCE: Table 5. Employment by major sector, actual and projected, selected years, 1959-90. *Monthly Labor Review*, August 1981, p. 38.



SOURCE: *Occupational Outlook Handbook*, 1980-1981 Edition, Bureau of Labor Statistics, U.S. Department of Labor.

Population is expected to decline in New England and growth in manufacturing employment in the 1980s will slow to half the rate of the 1970s growth.

This shift to the Sun Belt poses serious problems for workers concentrated in large, northern urban centers. Blacks and other minorities have been especially hurt by the loss of industrial jobs in the North. Analysts attribute the rise in unemployment among black teenagers from 29 percent in 1970 to 38 percent in 1980 to the loss of entry-level industrial jobs in the North.

As the Sun Belt continues to experience growth in population, income, and employment, many workers, displaced from jobs in old-line manufacturing industries, are not only lacking the skills for other jobs, but are not necessarily located in the geographic areas where employers are making employment and training opportunities available.

Worker dislocation is expected to deepen as the segmenting of the American economy continues, "threatening to create a nation divided into regions of haves and havenots" ("America's Restructured Economy" 1981, p. 62). The South and West have been winning the interregional battle for economic resources and are building an economic and political power base that will almost ensure that their booming growth will continue for decades to come (See table 2).

TABLE 2

MANUFACTURING AND REAL INCOME GROWTH BY YEAR AND REGION

	Manufacturing Income		Real Personal Income	
	1971-80	1981-90	1971-80	1981-90
	** Average Annual Percent Increase **			
Northeast & Midwest	-0.1	0.6	2.1	2.4
New England	1.3	0.7	2.4	2.5
Mid-Atlantic	-0.9	0	1.3	2.2
East North Central	-0.3	0.7	2.4	2.4
West North Central	1.7	2.1	3.3	2.8
South & West	2.4	2.6	4.5	3.2
South Atlantic	1.4	2.2	3.9	3.2
East South Central	1.3	2.8	3.9	3.8
West South Central	3.7	2.9	5.8	3.1
Mountain	4.8	3.4	5.7	3.8
Pacific	3.3	2.6	4.3	3.0
Total U.S.	1.0	1.6	3.3	2.8

Educational Changes, Worker Expectations, and the Underemployed

A number of developments in our schools in recent years have affected the school-to-work process. Industry continues to report deficiencies in basic and employability skills, general scientific knowledge, work attitudes, and work experience of entry-level employees. A growing shortage of skilled workers, and the projected needs for technically trained employees will continue to be prevailing conditions.

On the supply side, the declining quality of science and mathematics teaching and learning is a recurrent theme. "Schools report inadequacies in the preparation of teachers, minimal course requirements for graduation and for college admissions, archaic equipment and facilities in teaching and research laboratories, and declining performance by students on standardized tests" (Levine and Doyle 1982, p. 303).

However, there has been a steady rise in the educational attainment of the U.S. civilian labor force as a whole. In 1960, over 50 percent of the labor force had less than four years of high school. By 1978, this percentage had dropped to 26.3 percent and by 1990 is expected to be 19.8 percent. A steady increase in the percentage of labor force members who are college graduates is predicted—from 9.2 percent in 1960 to a forecast of 21.7 percent in 1990 (Employment and Training 1979).

The extra personal investment in more education has raised expectations that are often unmet. Most of today's employees have spent twelve to sixteen years in a classroom, view themselves as intelligent, and want a chance to contribute and advance. They have become increasingly diverse in their work values, needs, motivations, and satisfactions, yet their aspirations and skills often are unsuited to what is available in the labor market (Kalleberg 1982).

For many workers, education has not been the route to productive job opportunities. Younger workers, particularly those who have some college background, feel that their skills are underutilized on the job. Improving the matching of people to jobs is a necessary, long-range response to the problem of underemployment.

One of the realities of the current decade is that few Americans will be able to secure the type of job, with high pay, status, and upward mobility opportunities, that someone with a similar educational background could reasonably have expected to secure at the start of the 1970s. In our postindustrial society, underemployment will be endemic, a situation in which workers are unable to achieve self-fulfillment through productive and challenging employment. The mismatch problem is attributed to a university system that fails to provide adequate career counseling and information to its students; faculty members who promote their own specialities without regard to the realities of the job market; students who themselves choose courses that do not provide marketable skills; and parents with "degree fever" who insist on four-year college educations for their children.

In addition to the problem of the underutilized or underemployed college graduate, whose plight is the result not of overeducation but of miseducation and misplacement, there is the problem of declining educational achievement in our public schools. A nationwide survey of literacy, that was conducted during the period 1971 to 1976 under the direction of Dr. Norwell Northcutt, University of Texas, revealed that 11 percent of all persons completing school between 1951 to 1961 were functionally illiterate. This figure rose to 16 percent during 1962 to 1973.

In the United States 23 to 25 percent of all students today fail to graduate from high school, compared with 2 percent in the Soviet Union and 8 percent in Japan. Currently, the dropout rate for black youths in the nation is 35 percent; 45 percent for Hispanics. "An estimated 20 percent of those who do graduate from American secondary schools lack the language and number skills to function successfully in modern society" (National Association of Manufacturers 1982, p. 1).

In 1975, the Adult Performance Level study commissioned by the U.S. Office of Education showed that 23 million adults have serious literacy handicaps or are functionally illiterate. Persons unequipped with basic skills are at a continued disadvantage in the job market, particularly in a troubled economy. The least educated are the last to be hired and the first to be fired. It is significant that approximately 50 percent of all unemployed persons in the United States are under age twenty-five.

The mismatch of public school and postsecondary graduates to job openings is not encouraging in either the short or long term. This suggests that education will have to reconsider its relation to the economy and the larger society. Our educational system cannot as such determine the labor market; yet, it can, in this quasi-free economy, prepare people for the reality of the work place (a function that is inherent in its role in human resource development) and play a very constructive and vital part in economic development.

Population Changes

During the past two decades, U.S. population patterns and prospects have changed radically and contributed to the dislocation of workers. Almost overnight we have become a slow-growing nation; the overall rate of population growth is less than 1 percent per year. The feminist movement, increased female participation in the labor force, and the pill came together in recent years, accounting for the sharp reduction in births. By 1990, U.S. population is projected to reach about 244 million, which would be a 9.6 percent increase for the decade, or 21.3 million more people, compared with an 18.9 million population gain in the 1970s. Although this increase will be greater than that for the 1970s, the rate of growth will still be only half that of the 1950s.

While the population is growing at a modest pace, its composition is changing significantly. For one thing, the percentage of older persons in our national population is increasing. By 1990, the twenty-five- to forty-four-year-old age bracket will increase by almost 16 million and will rise, as a proportion of total population, from about 28 percent in 1980 to approximately 32 percent by 1990 (King 1979).

And there will be far fewer teenagers. By 1990, their numbers will decline by about 17 percent or 4.6 million. Shortly, in fact, they will be exceeded by the over-sixty-five population, a group whose numbers will be up 20 percent by 1990 to almost 30 million. As the number of younger people declines, there will be a demographic "bulge" in the twenty-two- to forty-four-year-old prime-age work force—from 39 million in 1975 to approximately 60.5 million in 1990.

The economic implications of these changes bear on the worker displacement problem. The civilian labor force is expected to grow by 1.5 percent per year and to total 112 million by 1985 and 119.5 million by 1990. This is a significantly slower growth rate than occurred during the decade of the seventies. With only moderate economic growth and a work place characterized by an increasing number of older employees and a shortage of younger workers, the unemployment rate, aside from cyclical fluctuations, should drift down closer to 4 to 5 percent by the end of the 1980s.

How these changes will affect the work place is difficult to predict. One possibility is that as the number of teenagers and unskilled workers declines in the 1980s, employers may find a shortage of this type of labor. The huge increase in the population of middle-aged adults probably will limit the number of opportunities in middle-management areas, bringing with it promotion problems. Those in the thirty-five to fifty-four age bracket will increase 28 percent in this decade, compared with a gain of only 4 percent in the 1970s.

Although a lower unemployment rate is anticipated, worker unrest may increase because of the previously cited demographic changes and changing values of the work force. Worker dissatisfaction may come from inadequate opportunities for promotion and an increasing population of older people whose Social Security benefits are dependent upon relatively fewer workers. This dissatisfaction will result in continuing pressure for affirmative action and a greater demand for part-time and flexible working schedules. A combination of decreasing fertility, increasing life expectancy, and increasing immigration, along with a growing skills shortage and declining educational achievement has enormous implications for the future of business, the economy as a whole, and more specifically, worker displacement.

Composition of the Labor Force

The outstanding change in work during the past thirty-five years has been the increase of women in the labor force. This major change has been called a "subtle revolution," affecting all aspects of family life and social life and having a significant impact on the displaced worker problem, particularly among youth seeking employment.

The percentage of women in the work force has been rising steadily since 1900: "between 1900 and 1940 from 20 to 26 percent and between 1940 to 1979 from 26 to 51 percent" (Stewart and Cantor 1982, p. 31). Women were responsible for 60 percent of the growth in the 1960-1975 period and are expected to account for some 66 percent of the growth over the next decade. The bulk of this increase has been from the women currently working who share a home with a husband and with preschool or school-age children (a 108 percent increase since 1950). Thus, marital status has been a declining influence as a reason for not entering the work force.

Allowing for the 1967 adjustment in definition of the labor force, participation rates of single women and of widowed, divorced, or separated women have risen only a few percentage points since 1950. In 1980, 57 percent of the women employed were married, 24 percent were single, and 19 percent were widowed divorced or separated. More than 70 percent of the working wives are employed at full-time jobs.

For the first time in history, a majority of American women are working outside the home. According to Shellenbargar (1982), in 1965, only 39 percent of women were in the labor force; the present rate is 52 percent, and it is expected to rise as high as 65 percent by 1995. Not only are more women working at this time, but also they are in the work force for the long term rather than temporarily.

In the past, women who were not in the lower socioeconomic group generally worked just to help out over difficult family financial periods or to help buy various luxuries such as an automobile. However, today most women expect to remain employed, regardless of their child-bearing plans and regardless of economic cycles. Of those working, 48.2 percent are in white-collar jobs, 25.9 percent in manufacturing, and 16.1 percent in government jobs. The challenge today is one of how to get them moved up and assimilated in the business and professional sectors.

Women in higher paid, higher status professional jobs present a growing competitive factor for adult males seeking these same opportunities. Similarly, when women hold the lower paid, less secure, clerical and service jobs, young men, in particular, are faced with fewer opportunities to enter the job market.

By 1980, more than two out of five mothers of children aged six or younger were working for wages. In families earning more than $25,000 annually, the majority now achieve this total by depending on two incomes; the husband's and the wife's. Ironically, while women have been making a significant effort to enter the work force, men have been slowly getting out of it. Between 1947 and 1977, for example, the number of men in the prime working years from sixteen to sixty-five who dropped out of the work force temporarily or permanently nearly doubled; from 13 percent to 22 percent.

The changing role of women in work poses a formidable challenge to vocational educators who were charged (in the Education Amendments of 1976, P.L. 94-482) with the task of eliminating sex role stereotyping and sex discrimination. Vocational education agencies are capable of responding to this dramatic change in female participation in paid employment because of their past involvement in both employability development and in adult, technical, and continuing education.

In contrast to the steadily increasing number of women in the work force during the past several decades, special groups such as blacks, Hispanics, and Asians experienced uneven concentration in the work place, with the proportion of black males in the labor force, for example, steadily declining, while the proportion of black women remained stable. Black males of middle age and above have dropped out of the work force at rates significantly higher than have white males of comparable ages.

There has been a gain in the employment of blacks in the professional, technical, managerial, and clerical categories since the 1960's. Further, blacks have undergone upgrading in blue-collar occupations, moving from the unskilled labor and domestic service jobs (which are subsequently filled by illegal immigrants and Hispanic nationals) for semiskilled operative and skilled employment.

While there has been a marked improvement in the employment, income, and education of blacks since World War II, they still tend to concentrate, within the broad occupational categories, in the least prestigious and lowest paid jobs. In the professions, for example, blacks are disproportionately engaged in the teaching and social service occupations, and have made only minimal gains in fields such as sciences, management, and engineering. With respect to white-collar employment, black gains, especially in management, have been concentrated in the public sector rather than the private sector.

Unemployment trends reflect most clearly the problems confronting the black work force. Since 1970, unemployment among blacks has steadily increased. During the decade of the 1970s, blacks accounted for almost 20 percent of the increase in unemployment. In 1980, minority groups, in the aggregate, constituted 11 percent of the labor force and accounted for 21 percent of the unemployed. During this decade, white women and minorities are projected to account for 74 percent of the growth in the labor force.

Income Changes

During the past twenty years, the increase in number of two income households has raised the average family income, even considering cost of living adjustments. According to the census of 1980, median family income was $20,840 for whites, $12,681 for blacks, and $22,075 for persons of Asian descent.

With the rise of the standard of living, an increase in the demand for products and, to a much greater degree, services has occurred. The major growth in employment in the service sector gives the U.S. marketplace the characteristics of an income-service-demand economy. This dramatic shift requires significant changes in preparing youth for work and retraining displaced workers.

National Economic Policies Associated with Human Resource Development

In addition to considering the structural economic shifts that have adversely affected workers, there is a need to examine those national economic policies that relate to the worker displacement issue.

In 1938, the nation committed itself to an official policy of improving our standard of living through the adoption of a minimum wage law. This was followed in 1947 with a commitment to a policy of full employment based on the rationale that federal government expenditures are large enough to be used to stimulate the economy and help create jobs. Finally, in 1962, legislation providing for an investment credit for business to further industrial expansion was enacted. However, there are built-in contradictions in these policies.

During the period of the Great Society under the Johnson administration, the commercial laundry industry, for example, pointed out the inconsistencies of these three national policies. Some displaced workers who had been out of work for years were being trained to operate equipment in commercial laundries. At the time the first group of people completed the training, Congress applied the minimum wage law to all laundries that generated over $250,000 in business annually.

For almost sixty-five years, few jobs had existed in a commercial laundry that could not be mechanized. Yet, they were not mechanized because it was more costly than using unskilled labor at low wages, which were below the minimum wage established for many other business operations. As displaced workers began to be retrained in laundry work, the federal government's investment credit policy helped to stimulate the mechanization of commercial laundries.

Thus, the contradiction here is that despite a national economic policy aimed at promoting full employment, our policy of a minimum wage, combined with an investment tax credit, produces an even stronger pressure on business to hasten automation of jobs, thus eliminating the low-skill jobs.

Most young people preparing for work expect to seek employment in the private sector through entry-level jobs. However, as the minimum wage has risen, many low-paying jobs have been eliminated, thereby denying millions of teenagers an opportunity to get a start in our private enterprise system. There are adequate data to show a direct correlation between the increases in minimum wages and the rise of unemployment among sixteen- to nineteen-year-olds in the United States. Thus, minimum wage legislation has made it extremely difficult for unskilled teenagers to enter our economic system.

The national economic policies discussed in this study—minimum wage, full employment, and investment credit—were developed and implemented as representing well-conceived and humane legislation. They have, however, fostered the elimination of unskilled jobs and contributed to worker dislocation. Looking ahead, the unskilled, displaced worker who is unemployed because there is a dearth of unskilled jobs is just as much outside our private enterprise system as if the nation had a recession and his/her job was eliminated.

These policies affect worker displacement, and in light of this, at least two major policy issue alternatives are suggested:

1. Should there be a continued effort to increase job skill levels of workers and the technological efficiency of our economic system, in that the incremental output will not only pay the cost of supporting those who are displaced or forced out of the labor market, but also will be instrumental in improving the standard of living for those who are employed?

2. Should a limitation be placed on the technical efficiency achieved by society through forcing the private sector to provide low-skill jobs on a formula basis related to the size of the business operation in order to reduce the number of displaced workers who are recipients of social welfare?

Other scenarios may exist. In any event, the inconsistencies in our current national economic policies need to be addressed if our basic economic goals are to be achieved.

PREPARATION FOR WORK AND THE RETRAINING PROCESS

Lack of Alignment Between Education and the Employment Community

It has always been difficult for youth and adults to make the transition from the classroom to the world of work. Students require a realistic perception of the work place; good quality, up-to-date educational programs; and current and relevant occupational information to facilitate their entrance into the work force. The ultimate success of an educational system depends upon its ability to provide these opportunities. Furthermore, the availability of such learning experiences can be realized by recognizing that work and education are so related that neither can exist in isolation from the other.

Bringing education, the primary delivery system for the labor market, into better alignment with the work place is the priority need in reducing worker displacement. Lack of alignment between education and work systems is the central issue in the worker supply/demand imbalance. A coherent system of human resource development and management must be designed in which effective coordination and cooperation between education and the employment community enhance the efficient use of resources in confronting the worker dislocation problem.

The vocational education community, in particular, has formidable problems in its efforts to reduce the gap between the schools and industry. An atmosphere of fiscal conservatism is prevalent at the local, state, and national levels. Student enrollment has stabilized or been declining in many areas of the nation, and there is increased competition from public and private agencies and organizations for the limited available resources that have traditionally supported vocational education programs.

"Vocational education practitioners must be prepared to meet the challenge to coordinate and capitalize on opportunities for establishing linkages for the future" (Maurice 1981, p. 275). There are many agencies, organizations, and institutions that are directly or indirectly involved in implementing vocational education services. Working separately and often divergently, they complicate coordination with the employment community. A centralized, comprehensive, cost-effective structure such as an industry-education council could significantly improve vocational education's capability for preparing youth and adults and retraining dislocated workers for productive employment.

Improving Human Resources Development through a Comprehensive Career Education and Vocational Training Program

As U.S. industry faces a major retooling and refitting challenge in the 1980s, there will be an increased demand for complex occupational skills. Further, the technological adjustment may create more structural unemployment. A new look at human resource development is needed within a framework that recognizes the potential for increased industry-education joint efforts.

There is considerable agreement that our nation's human resource policy should focus on the following employment and training goals that meet the challenges of technological advances, the effects of automation, and the fluctuations of the economy:

1. To upgrade the quality of public education and offer secondary school students career training that is oriented toward full-time, adult employment

2. To develop remedial programs that will provide functionally illiterate youths and adults with the basic reading, writing, and computing skills necessary to perform productive work

3. To provide programs that will allow adult workers to retrain and upgrade existing skills

4. To identify and address critical skills shortages

5. To match human resource development to local and regional labor market needs (National Association of Manufacturers 1982, p. 1)

Despite costly federal employment training programs, most workers still receive their basic preparation for work in secondary schools, colleges, and technical institutes. In order to improve significantly the education-to-work process as a preventive measure and reduce the worker displacement factor, a career education component is needed within the public education system "which assists youth and adults to embark on a career with values, orientations, knowledges, and skills that will enhance their chances of adjusting to our society on a continuing basis" (Gilli 1978, p. 29). Incorporating a comprehensive career education system in public school education involves integrating various stages of career education into the total school program—that is, awareness, exploration, decision-making preparation, and placement. The career development process must be continued in postsecondary education.

Vocational training, including business education, is an important element of career education. When a student has made a career choice to pursue a marketable skill, the vocational education program becomes the vehicle for training. At the middle/junior high school level, broad vocational programs in many areas are available; in senior high school, area vocational school, and community-junior college instruction, more specialized programs in these same areas are offered. More than twenty-five thousand secondary schools (grades nine through twelve) and two thousand community colleges and technical institutes offer employment-related training.

Yet, vocational education program planning should not be "front loaded" to serve only those entering the work force for the first time; it should be comprehensive to meet the needs of other groups such as displaced workers. Before undertaking the retraining of dislocated workers, vocational educators must be aware of local, regional, and statewide employment needs, the skills required by the specific industries, and the employee behavior that employers desire. Accurate forecasting of employment needs is difficult, but it is essential to occupational planning.

Vocational education should be a major contributor to national policy for reducing worker displacement. The critical questions applicable to displaced workers insofar as vocational education is concerned are (1) what contribution can this human resource delivery system (vocational education) be expected to make to resolve this structural problem and (2) should federal funding for vocational education be greatly increased? First, a brief overview of other systems that are vehicles for retraining dislocated workers is presented.

Historically, the private sector, for the most part, has initiated training for specific skills needed in individual firms or industries. For individuals already employed, skills are usually acquired informally on the job. In particular, many larger companies have developed formal training programs, especially for jobs that are unique to a firm's operation.

Unions in shrinking industries are starting to win provisions requiring companies to retrain displaced workers. During the spring of 1982 "the United Auto workers won promises from General Motors Corp. and Ford Motor Co. to commit $120 million and $25 million respectively to setting up retraining programs" (Lincoln 1981). Although there is no figure available on how much employers spend on retraining, the total estimate for all private sector training is $30 billion a year.

The new technology will increase the need for retraining. An estimated 4 million factory jobs have been identified for possible replacement by robots by the year 2000. An additional 3 million jobs have been identified for replacement by robots early in the twenty-first century. Retraining, therefore, is going to become an increasingly important part of every business operation.

In the building trades, for example, apprentice programs have provided training in various skilled occupations. Private vocational schools and institutes have received private employer sponsorship and financial support to provide formal training in a number of special fields such as electronics, printing, and the various clerical skills.

Government-sponsored skill training programs have, until recently, been very limited, and those efforts that have been made were undertaken primarily by state and local governments. As a result, the growth in vocational training associated with the recent rapid expansion of junior and community colleges is attributed, only in a very minimal way, to funding from the federal government.

In order to broaden the role of vocational education, Congress approved the Vocational Education Amendments of 1968. They included grants-in-aid designated by Congress, specific expenditures for training the disadvantaged, and support for cooperative work-study programs. In order to justify these expenditures, researchers have been trying to determine the effect of vocational education on students' success in the work force, but they have been unable to come to an agreement, and it appears unlikely that a consensus will be reached soon. This is particularly true since few surveys have focused exclusively on the effectiveness of vocational education, and researchers have had to use data originally meant for other purposes to study the impact of job training.

However, from a review of the best available national studies comparing college preparatory, vocational, and general curriculum graduates of secondary schools, one can conclude that in spite of the conflicting findings, there are sufficient data to indicate that vocational education apparently yields positive returns to students in comparison to the other preparatory categories. "The same studies show somewhat higher rates of employment, on average, among young men whose high school background was in the vocational curriculum as compared with those in the academic or general curriculum" (Pierson 1980, p. 130).

The positive effects of vocational training programs on the job status of displaced workers and other hard-to-employ groups show up more clearly in periods of expanding business when job openings are on the rise. If carefully designed and implemented as a cooperative effort between vocational educators and employers, these programs can provide entry to employment opportunities for a variety of clientele, including those lacking in basic skills.

The major responsibility for increasing support to vocational schools for programs aimed at retraining displaced workers lies with the federal government since it commands the source of funds required to undertake an effective strategy. Federal efforts to strengthen and broaden vocational education's role in dealing with structural unemployment and related problems would be realistic at this time. An examination of federal employment and training policy related to displaced workers offers another major approach to this problem.

Federal Employment Policy and the Displaced Worker

Federally sponsored employment and training programs have been undertaken to solve several incompatible problems simultaneously. The nation's employment policy has been remedial in nature, supporting programs that are generally improperly designed and maintained to deal with those individuals who have difficulties in seeking, getting, and holding jobs.

Federal job training programs have not been directed "to knowledges and skills that relate to productive employment as assessed through real knowledge of the work place" ("Retraining Displaced Workers" 1982, p. 178). There has never been a coherent federal jobs program since the Great Depression.

The Manpower Development and Training Act (MDTA) of 1963 established a federal program to upgrade the skills of workers, particularly in economically depressed areas of the nation. Yet, some observers hold the view that this helped start the migration of industry to the South. When the Comprehensive Employment and Training Act (CETA) superseded the MDTA in the early 1970s, the priority shifted from training to creating temporary jobs for minority workers.

The federal government currently sponsors a variety of programs for unemployed people, including services such as placement help, job training, relocation aid, and cash assistance. Although displaced workers may need these services, there is limited availability for this group. These programs, in the aggregate, could not be considered a comprehensive policy for displaced workers. A closer examination of current programs for the unemployed highlights the lack of services to displaced workers.

The staffing limitations of the U.S. Employment Service, a federal-state system providing job search assistance through a network of 2,600 regional offices, restrict the quantity of personal services available to the displaced worker. This agency also has had problems in developing listings for the types of jobs that might be suitable for the experienced workers among the dislocated.

CETA, the major program for providing job training, has generally not been used by displaced workers. Rarely has CETA public service employment offered anything but a temporary job. This program, branded as a boondoggle by the Reagan administration, has been criticized for not effectively training people for existing jobs in the private sector. It was targeted toward low-income, disadvantaged individuals, and perhaps because of this, many displaced workers have been reluctant to seek assistance through it.

Under the unemployment insurance system, income replacement benefits, which are generally available for twenty-six weeks, are usually exhausted before displaced workers acquire new positions. Special assistance programs such as Trade Adjustment Assistance (TAA) is restricted to workers whose unemployment results from import competition.

Since the enactment of the 1961 Area Redevelopment Act, which was aimed at reducing structural unemployment among coal miners in Appalachia, federal expenditures on employment and training programs have increased dramatically, approaching an estimated $15 billion in 1983. These programs have been conducted largely outside, and in addition to, existing private sector and training vocational education programs in public schools and community colleges. In regard to this, however, a number of evaluative studies of CETA programs reflect a basic conclusion that unless work experience is combined with academic or vocational training, the activity has no significant effect on future employability.

Proponents of government employment and training programs point out that these programs can offset the failures of the market to produce enough training and other labor market services. Government-provided training opportunities, they argue, could compensate for the deficiency in private sector training. However, another view, consistent with an earlier discussion on national economic policies associated with human resource development, holds that "although not explicitly stated, it appears that a major purpose of current manpower programs is to provide jobs and upgrade skills of those persons who were displaced as a result of other government regulatory policies, especially the minimum wage" (The Heritage Foundation 1982, p. 2).

The Reagan administration's philosophy focuses on stimulating economic growth as the way to create job opportunities, rather than depending on federal programs. An important part of the White House plan is to place more reliance on state and local governments, the private sector, and individuals to render services the federal government has been providing. Emphasis is on a "government-private sector training relationship that would limit federal involvement to offering incentives to employers who train workers themselves" (Cook 1981, p. 19). On July 1, 1983, the Senate passed a jobs bill, originally opposed by the administration, that includes $100 million a year for retraining displaced workers through the Private Industry Councils (PICs)—federally financed groups whose primary purpose is to help minority workers find jobs.

The National Commission for Employment Policy, in a 1981 study (Bendick and Devine 1981), concludes that there is little support to warrant federal employment and training assistance for displaced workers. The key findings of the study indicate that (1) the overall size of the dislocated worker population is relatively small; (2) the "category" of dislocated worker itself is a weak indicator that an unemployed person will "suffer long periods of unemployment, special difficulties in becoming reemployed, or extreme hardship while unemployed"; and (3) if displaced workers do experience unusually long periods of unemployment, it generally reflects "past and present affluence rather than past or present distress." The commission takes the position that displaced workers should not be included in the administration's job training proposal because their level of need does not justify it, and doing so leaves less money to train the severely disadvantaged.

NEW APPROACHES TO REDUCING WORKER DISPLACEMENT

Improving the Occupational Planning Process

The amount of information displaced workers have on the availability of alternative jobs can affect their adjustment. "Labor-market economists are particularly concerned with unblocking information channels because workers are woefully ignorant of their options, and this lack of knowledge contributes to unemployment and underemployment" (O'Toole 1978, p. 127). Many displaced workers having only limited occupational (job/labor market) information must devote considerable time and expenses to increasing their knowledge of potential employment opportunities. Processing information about job openings correlates with socioeconomic status. Middle-class, college-educated people, who are higher skilled, white-collar workers and professionals, have a fair knowledge of the opportunities open to them because of their exposure to the employment market, a by-product of performing their jobs. The lower classes, or less-skilled workers, generally get little of this type of exposure. Also, the job-seeking skills of workers who have been employed for a lengthy period are likely to have eroded. Therefore, the lack of occupational information and job search skills are impediments to adjustment.

Insufficient information about alternative jobs may also lead to unrealistic job aspirations, thereby contributing to a difficult and long period of unemployment, particularly for displaced workers with substantial job tenure. Their initial aspirations may focus on securing a compensation package similar to the one they received before layoff. Middle-aged workers with lengthy job tenure and specific skills may adjust slowly to the reality that their income may be significantly reduced, thereby prolonging their period of unemployment. Workers with shorter tenure, in contrast, are less likely to hold unrealistic job aspirations.

The changing contours of the marketplace require an occupational information delivery system that meets the needs of the displaced worker. Those involved in occupational planning and evaluation, vocational educators, and employment and training personnel recognize the problem with forecasting human resource needs. Accurate, long-term projections of the demand for workers categorized by specific occupation, industry, and region, and the supply of workers designated according to levels of skill, training, and education, are seemingly unattainable. Vocational educators engaged in "futuring" projects should recognize these limitations.

Improving the alignment between education and the employment sector, which is central to reducing worker dislocation, requires a coherent occupational planning system. Yet, we have no real sense of the true supply/demand equation in occupational planning, which is essential in retraining displaced workers, preparing youth for productive employment, and meeting employer needs.

The prime source of employment data for the average vocational education planner is the state labor market analyst of the local or state employment service funded through agreements between the Bureau of Labor Statistics and the state employment service agencies. However, the data obtained for a standard metropolitan statistical area (SMSA) do not reflect a large enough sample of employers needed for effective occupational planning or career development activities.

At the national level, the National Occupational Information Coordinating Committee (NOICC) has a basic mandate to make sense out of various occupational data produced by the federal government and to help states deliver useful standardized information to citizens on the projected supply and demand for specific jobs. NOICC has awarded grants to a limited number of State Occupational Information Coordinating Committees (SOICCs) to encourage and aid in the development of Statewide Career Information Delivery Systems to give special attention to labor market information for youth.

Today, SOICCs in forty states are putting together supply and demand data. NOICC has reported that SOICC data are being used to plan state vocational education programs, to help in economic development and to foster cooperation between vocational education and CETA programs. However, neither the NOICC nor SOICCs have had a significant aggregate effect on national, state, or local occupational planning, and expectations of meeting the future planning needs of vocational education and employment and training programs through them are minimal in the near term.

Other sources of occupational employment information include the decennial census, the Occupational Employment Statistics Survey, job bank data, and the Employment Security Automated Reporting System. It is the inefficient use of these and other data that has inhibited occupational planning and evaluation. Research findings show that "when labor market information is used in making decisions about program implementation or redirection, such information often seems to be used to further justify decisions that have already been made on the basis of other kinds of information" (Starr, Marx, and Zahniser 1982, p. 1).

This unsystematic delivery of information to displaced workers and occupational planners suggests the need to establish an occupational information system that begins with developing an economic and employment profile of an SMSA—one that educational planners, employers, human resource analysts, and economists can use for occupational planning, vocational education programs, instruction, job placement, and retraining, and one that can serve as a primary occupational information resource for the displaced worker.

An industry-education council, for example, could serve as a catalyst for gathering data on an area's past economic performance, trends in occupations in the services and goods-producing sectors, the relationships of population, employment, and income to the local economy, perspectives on the local unemployment problem; and the long-term prospects for an area's economic development. Chambers of commerce, economic development agencies, postsecondary urban economists, and state department of labor economists are primary sources of data.

An economic and employment profile of an SMSA would also include a macro-overview of the previously cited changes in the national labor market, along with national and state economic and employment trends that serve as a baseline for comparison purposes with an SMSA's situation. The profile offers a realistic framework for the development of an occupational information delivery system, one capable of disseminating supply/demand data within a short period of time at a relatively low cost. The profile meets a compelling need for a coherent and cost-effective way of incorporating labor market information into the process of planning and evaluating vocational education. It would help ensure that training would be more closely related to the kinds of jobs that are available and to the needs of those for whom the vocational education system is intended.

The economic and employment profile, therefore, constitutes the basic framework for addressing training problems and concerns of dislocated workers. It constitutes an occupational needs assessment that can significantly improve the analysis and understanding of--

1. the nature of a community's displaced worker problem,
2. the characteristics of the community's displaced workers,
3. the occupational and employment traits of the community's displaced workers,
4. displaced workers' expectations and needs,
5. training needs of displaced workers,
6. industries and occupations offering training and placement for displaced workers,
7. program planning considerations.

Although labor market information is plentiful, that information needs to be utilized in a systematic and cost-effective manner so it assists the users in forecasting human resource needs for program planning and evaluation. Developing an economic and employment profile is a suggested first step in the process.

Decentralizing the Response to Local Worker Displacement

Impact of the New Federalism

The era of "New Federalism" launched in President Reagan's 1983 State of the Union address, will have a significant impact on the approaches to assisting dislocated workers. It focuses on reshaping the relationship between the federal government and the states—transferring power from Washington, D.C., to the states.

The Reagan administration is philosophically opposed to centrally directed training programs, which it considers largely inefficient. The emphasis is on the importance of "finding creative means of encouraging the private sector to assume some of the responsibilities that the federal government is no longer able, or willing, to shoulder" (Pryde 1982, p. 201).

Within the corporate community, retraining is going to become an increasingly important part of every business activity. With respect to their relationship with the federal government, local business leaders are being asked to cooperate with government by helping run a federally sponsored job training program through local Private Industry Councils (PICs). The private sector, therefore, would work with public officials in PICs to determine the appropriate employment and training programs for their particular labor market.

Administrative decentralization is at the heart of President Reagan's private sector initiative programs. Yet, the federal government has no comprehensive policy for dealing with worker dislocation. Job training is one approach to assisting displaced workers. The other types of assistance considered as components of a federal policy on displaced workers are job search assistance, training, relocation assistance, and prelayoff assistance.

In considering the cost-effective aspects of retraining displaced workers, the Congressional Budget Office, in its report on *Dislocated Workers: Issues and Federal Options* (1982), stated that if private vocational and technical schools and community colleges were asked to undertake the retraining program, the cost could range from $132 million to $920 million during fiscal year 1983. If the government opted to subsidize on-the-job training with private sector employers, the estimated cost could be between $90 million to $650 million. If 10 percent of the displaced workers seeking training selected higher education institutions, the 1983 federal fiscal outlay could involve between $4 million and $25 million. Using a combination of the three options, that is, 10 percent in higher education and the remainder divided between vocational education and on-the-job training, the estimated expenditures would range from $107 million to $717 million.

The report concludes that none of the current federally sponsored employment and training programs are especially appropriate to responding to the worker displacement problem.

Meeting Human Resource Needs through an Education Industrial Complex

Providing programs that will allow displaced workers opportunities to retrain and upgrade skills is a goal of human resource development policy. Education, the major human resource delivery system, must develop a close cooperative effort with industry in order to respond effectively to the needs of this group of unemployed workers.

There is a growing recognition, in this period of the New Federalism, that the employment and education communities need to undertake joint retraining efforts for productive work within a local, centralized, cost-effective mechanism. This would necessitate establishing a local infrastructure—an education-industrial complex—that would facilitate sharing of resources in furthering human resource and economic development.

Education-work linkages existing since the beginning of the last decade continue to be conducted on a fragmented, independent, duplicative, and ad hoc basis.

The industry-education council (IEC) model is a response to the need for a structure designed to unify the interaction between the work place and the schools. "Industry" refers to the business/labor/government/professional community, and constitutes the local power structure in this systemwide advisory group working with the schools. The chamber of commerce plays a key role in the organization of an IEC. As a structure for linking the work place and education, "it mobilizes the key resources of a community, develops plans for their efficient allocation and provides a great opportunity to achieve program objectives" (National Association for Industry-Education Cooperation 1972, p. 3).

If public and private vocational education is to improve its capability to coordinate its retraining of displaced workers with the changing work place and thus make a significant contribution to economic development, it needs to be linked to the leadership of the employment community represented in an industry-education council. A council's experience in occupational information systems, curriculum construction, employee training, professional staff development, and job placement can contribute to the effectiveness of a local vocational education program and its efforts to serve dislocated workers.

Redirecting vocational education to deal with worker placement will require the best and most intense efforts of the educational community and the full involvement of representatives of business, industry, labor, agriculture, and the general public (*Vocational Education Reauthorization* 1981). Vocational education advisory committees as presently constituted do not

generally represent the "full involvement" of the employment community in support of their initiatives.

While vocational educators and their advisory committees have broadened their linkages with CETA prime sponsors, Private Industry Councils, and community-based organizations, they have not engaged the key players involved in economic development who are represented on industry-education councils.

Vocational education advisory groups' influence on vocational education programs varies. Local committees are usually composed of equal numbers of management and labor with additional members chosen from the public. The most effective advisory committees meet regularly and their advice helps shape the program. "Too frequently, advisory committees are used on an ad hoc basis, for example, to build support for a local tax increase" (Evans 1982, p. 263). Vocational education advisory committees and industry-education councils operate at two levels of coordination. The former does not represent the power structure in industry, the latter advisory group does. As the centralized advisory structure for the schools and the business/labor/government/professional community, an industry-education council links with existing local academic and vocational advisory groups and helps to establish a comprehensive structure for sharing resources.

Given the employment needs and characteristics of involuntarily displaced workers and the kinds of training required, vocational educators must pursue the most appropriate way to combine vocational education's resources (personnel, facilities, material, and equipment) with the employment community. Relevant curricula and professional staff development in vocational education are priorities in designing specific training programs for occupations offering reasonable numbers of job openings. Vocational educators require ongoing, intensive inservice training to plan, implement, and evaluate these programs. Vocational education advisory committees will find linkage with an industry-education council an important asset in assisting in professional staff development required for implementing curriculum changes tailored to specific programs for dislocated workers.

Occupational Adaptability and Transferable Skills

The idea that one set of occupational skills can be learned and provide continuous work for an individual throughout a lifetime is generally not valid. Most workers are prone to job loss due to either the partial or complete shutdown of businesses in a community or due to changes in industrial and occupational technology that render their present occupational skills obsolete. In either case, workers require retraining that will facilitate their occupational adjustment.

The concept of occupational transferability refers to an aspect of human performance that enables people to move successfully from one occupation to another. In practice, the training institution is confronted with the problem of deciding which occupational skills to teach the dislocated worker to provide an optimal preparation for employability both in a specific job and in a variety of jobs.

Workers with a specific set of skills and appreciable job tenure generally experience the greatest earnings loss if they need to seek new employment. Those who do reenter the labor force are likely to receive significantly lower wages because their skills and experience may not be highly valued by the new employers. By contrast, dislocated workers with more general training in transferable skills—these being problem solving—should be more occupationally adaptable. Having transferable skills will not guarantee adaptability, but it does improve the prospects for it.

To the extent that displaced workers perceive similarities among jobs and are able to transfer their skills and knowledge effectively, the time and costs related to supplemental training or retraining should be reduced and result in a savings to both employers and individuals. There appears to be "some reasonable consensus about a number of broad categories of skills, knowledge, and person characteristics that are important for success in a variety of occupational and other life settings" (Pratzner 1978, p. 1).

Skills alone will not determine a dislocated workers's adaptability or occupational mobility. Other factors are involved, such as conditions of the labor market, personal career considerations, and the union situation. However, it is reasonable to assume that skills, attitudes, and knowledge are among the primary factors in the occupational adaptability of displaced workers. Vocational education can have a significant influence on these specific factors. One approach used in vocational education to improve occupational adaptability through transferable skills is the cluster curriculum, which seeks to identify requirements or characteristics common to a group of related occupations. The instruction, curriculum, and learning then is focused on these shared requirements. There are as many different strategies for clustering occupations as there are different ways of describing jobs. As a result, occupational clusters have been developed according to skill requirement, materials, equipment, processes, location, and worker traits (e.g., aptitudes and physical requirements, temperaments, general educational development), or a combination of any of these characteristics.

Occupational clustering has had limited acceptance or use for actual vocational preparation. Incorporating this approach into training programs for displaced workers will require the efforts of the *total* educational system, not just vocational education. Helping an individual become occupationally adaptable and acquire transferable skills requires calls for helping the dislocated worker assess and develop his or her capabilities as a total career development process. The one problem with the clustering approaches is their primary focus on work factors that are external to the displaced worker rather than the skills and capacities intrinsic to the individual.

Placement of a displaced worker in a related occupation has been used as the criterion for estimating a training program's effectiveness. Yet, there are many ways to determine which occupations are related to training, it is difficult to determine how they are related, and there is minimal agreement on the subject. For this reason, in considering occupational adaptability and transferable skills with respect to worker displacement, there is a need to reassess the almost exclusive reliance on training-related placement as the criterion for program effectiveness.

In summary, improving the development of transferable skills requires a joint effort between industry and vocation/academic education. Employers can work toward developing better analyses, assessments, and descriptions of the skills and knowledge requirements of occupations. They can also assist educators in identifying occupationally transferable skills, knowledge, and personal characteristics that have relatively broad application and use. Professional school staff (teachers, counselors, and administrators) can, through ongoing, inservice training conducted with the help of a vocational education advisory committee and an industry-education council, develop the curriculum and educational support systems to develop further displaced workers' transferable skills and to facilitate their occupational adaptability.

Linking Education and Employment and Training in Human Resource/Economic Development

Earlier in this paper, a number of employment and training goals were suggested as a basis for developing a national human resource policy. The goals pertaining to displaced workers will

require vocational education to reassess regularly employers' needs for trained workers, displaced workers' needs for job skills, and the delivery system capacity to respond to those who can profit from vocational education programs.

In carrying out its mission of teaching specific employment and employability skills, vocational education (public, private, and postsecondary) has been encouraged to establish a closer working relationship with the government-sponsored employment and training programs, particularly with respect to special needs groups. A coordinated effort between these two potential partners is viewed as having a positive effect on the long-term structural employment problem of these groups and enhancing their job prospects and career opportunities.

A 1981 U.S. Department of Education report, *Manpower-Education Coordination: Two Decades of Frustration*, points out that only superficial improvements have been made in linking education and job training programs, and that there is little reason to expect more success in the future. According to the report, different business cycles, fragmented employment and training programs, and the absence of strong coordinating mechanisms will continue to thwart joint activities between education programs and government-sponsored training programs such as CETA.

If coordination between the two sectors is to be accomplished through Private Industry Councils, for example, one can anticipate problems. Education's participation in the PICs was encouraged following the enactment of the Private Sector Initiative Program under the CETA reauthorization legislation in 1978. However, a clear role was not formulated for the schools; and the education sector, in general, has not been systematically involved in PIC planning. Further, PICs, in many instances, were established in areas where the private sector previously had been directly participating in career development and training activities with such advisory groups as industry-education councils, vocational education advisory committees, and career education advisory groups.

Expectations for any significant role for the schools in the PICs relative to the Reagan administration's plans to replace income supports with training through private sector involvement are minimal. Federal employment and training initiatives have never really pleased the private sector. Although private industry was given a statutory role in 1978 to improve the coordination of job training with local labor markets, past experience indicates little likelihood that this industry-government relationship will have a significant impact on training programs for special groups such as displaced workers.

In improving the employability of individuals, private industry prefers to work with educational institutions because of their institutional longevity and permanency, the perception that schools are a basic community institution that ought to serve *all* people, and the residual credibility of school systems' programs. Industrial education and training cannot effectively assume the burden of retraining displaced workers. A vocational education system adequately financed and connected to the employment community can, as a joint effort, reduce the structural imbalance in the worker supply/demand equation and help provide dislocated workers with training for long-term, productive employment in the work place.

SUMMARY AND RECOMMENDATIONS

Examination of the displaced worker issue has led the author to several conclusions:

1. Available evidence suggests that the involuntarily dislocated worker will continue to be confronted with significant obstacles in reentering the work force due to structural changes in our economy and in spite of the upturn in the business cycle.

2. Changes in both the number of people in specific occupations and the contents of occupational activities will increase the number of displaced workers as a result of the continued shrinkage of basic industries, plant closings, foreign imports, and the rapid introduction of new technology over the next twenty years. The wide disparity in interpreting the size of the unemployed work force regarded as dislocated poses a difficult problem in determining who would warrant whatever assistance the federal government provides to displaced workers.

3. Employability development and job training are integral components of economic development. Displaced workers do not contribute to the local economy. There is a need for organized and systematic efforts to strengthen a community's infrastructure for cooperation between public/postsecondary education and the private/public employment sector.

4. The work force and the work place of the 1980s are undergoing significant change that promises to continue and accelerate into the twenty-first century. Demographic changes, the regional split between Sun Belt and Frost Belt, technological advances, the restructuring of our economy from a goods-producing to a service system, changes in the composition of the labor force, and stagflation are major factors contributing to the dislocation of workers. They could result in larger scale joblessness than has occurred at any point in our history.

5. A number of national economic policies are related to the worker displacement problem. The policies of minimum wage, full employment, and investment credit have built-in contradictions. They have led to elimination of unskilled jobs and worker dislocation.

6. Lack of alignment between education and work systems is the central issue in the worker supply/demand imbalance. The vocational education community, in particular, has formidable problems in its efforts to reduce the gap between the schools and industry. Fiscal conservatism, a lack of growth in student enrollment, and competition from public and private agencies and organizations for the limited resources that have traditionally supported vocational education programs have hampered vocational education's efforts to provide training for displaced workers.

7. One of the broadly supported employment and training goals of our nation's human resource policy is to provide programs that will allow adult workers to retrain and upgrade existing skills. Vocational education institutions in the nation cannot create

openings in the job market, but they can teach the skills and work habits that dislocated workers need to fill the jobs that are available.

8. There is no real understanding of the true supply/demand equation used in occupational planning, which is essential in retraining displaced workers. The unsystematic delivery of labor market information to displaced workers and occupational planners suggests the necessity of establishing an occupational system that begins with developing an economic and employment profile of a labor market area.

9. Under the "New Federalism," retraining is going to become an increasingly important part of every business activity. The corporate community is being asked to cooperate with government in helping run job training programs through Private Industry Councils. None of the current, federally sponsored employment and training programs are especially appropriate to respond to the worker dislocation problem.

10. Industry-education cooperation, planned, organized, implemented, and evaluated in a systematic, cost-effective manner, can significantly reduce the problem of displaced workers. Existing education-work linkages, however, continue to be conducted on an uncoordinated, duplicative, and ad hoc basis. If vocational education is to improve its capability in retraining displaced workers, further its overall human resource mission, and make a significant contribution to economic development, it needs to be linked to the leadership of the employment community.

11. Workers who are displaced due to partial or complete shutdowns of businesses or changes in industrial and occupational technology that render their present occupational skills obsolete require retraining in transferable skills which will facilitate occupational adjustment. Occupational clustering has been one approach used in vocational education to improve occupational adaptability through transferable skills.

12. In improving the employability of individuals, the private sector prefers to work with the schools because of their institutional longevity and permanency, the perception that schools are a basic community institution that ought to serve all people, and the residual credibility of school systems' programs. A coherent, joint effort of both vocational and academic education and industry is needed in providing dislocated workers with training for reentry into the work force.

Based upon this discussion of displaced workers, the following suggestions or recommendations are offered:

1. This nation needs to establish a consistent employment and training policy. We have a history of multifocused, confused, and replaceable programs—stop gap "solutions" for displaced workers. Billions have been spent on income maintenance, and only pennies for training and skill development efforts.

2. There is a need to unify the system of human resource development among business, education, labor and government in resolving worker dislocation, and to develop the infrastructure and processes for doing so during the 1980s. The industry-education advisory council can serve as the umbrella mechanism for local human resource and economic development.

3. A large fraction of the public investment in employment and training programs could be more productively spent in improving vocational education and career development for

retraining displaced persons. Schools will continue to be the best and most equitable institutional form for educating and training dislocated workers for long-term, productive employment.

4. Vocational education, working jointly with business, labor, and government at the local level, needs to undertake long-range planning and training, and make every attempt to remain receptive to innovative and unusual ways of addressing worker dislocation. A community approach to resolving this structural problem is preferred to the overorganized and overcentralized involvement of federal agencies.

5. Private industry needs a strong national economy and should be involved in every step of a new and dynamic public/private partnership in dealing with displaced workers. Such involvement calls for private industry's time, resources, and talent in planning, designing, maintaining, and evaluating effective education and training programs in response to any type of large-scale dislocation.

6. Improved labor market occupational information is needed by displaced workers, employers, vocational educators, and government-sponsored employment and training program personnel. An economic and employment profile of a labor area can provide the framework for mounting effective retraining and relocation efforts.

7. The employability development programs used in vocational education and programs for the hard to employ can be adapted and used for displaced workers with considerable success (Gordus, Jarley, and Ferman 1981).

8. In responding to displaced workers' reemployment needs during this "era of limits," vocational education will need to reevaluate the very core of its mission, develop relevant curricula for training these workers, and conduct continuous and intensive staff development programs to upgrade teachers, administrators, counselors, and other support staff.

9. State legislatures should view economic development as a top priority. The quality of the work force (human resources) plays a major role in attracting industry to an area. Legislation should be enacted appropriating funds to state education departments for activities designed to help expand and improve the quality of vocational education's training programs for displaced workers and to assist in unifying industry and education at the local level.

10. Further research is needed to determine what does and does not work in planning, administering, implementing, and evaluating specialized and direct training for dislocated workers, and what refinements are necessary in the delivery system that must respond to this problem.

These recommendations have long-term potential beyond the important initial task of facilitating reemployment for displaced workers. They offer a coherent approach to providing trained workers, industry-education coordination, and economic development efforts, all important factors in attracting new business.

Given the national priorities of reindustrialization and improved economic productivity, the past ineffective policies regarding worker displacement cannot be permitted to continue. A public/private partnership, highlighted by vocational education-industry leadership, offers a realistic solution to the imbalance between worker supply and demand.

The relevant literature gives major consideration to the reasons for failure in resolving worker displacement. The problems are, in part, questions of information, guidance, mobility, and the reduction of barriers to workers entering occupations and employment. In part, they are questions of improving the qualities and characteristics of both workers and jobs to make the former more productive and the latter more desirable.

In the final analysis, whether the displaced worker problem is resolved depends on whether the business, education, labor, and political decisionmakers will come together to provide the necessary leadership. The great danger to our economy is in doing nothing. An enormous amount has to be done in dealing with this area of human resource development, and time is running short. The private and public sectors must begin.

REFERENCES

"America's Restructured Economy." *Business Week*, 1 June 1981, p. 62.

Bendick, M., Jr., and Devine, J. R. "Workers Dislocated by Economic Change: Do They Need Federal Employment and Training Assistance?" *Seventh Annual Report: The Federal Interest in Employment and Training*. Washington, DC: The National Commission for Employment Policy, 1981, pp. 175-226.

Bergsten, C. "The United States and the World Economy." *The Annals of the American Academy of Political and Social Science*, March 1982, p. 11.

Breckenfeld, G. "Business Loves the Sunbelt (and Vice Versa)." *Fortune*, June 1977, p. 133.

Clark, D. M. "Industry-Education Collaborative Efforts in Youth Employment." *Special Report No. 14: Directions for a National Manpower Policy: A Collection of Policy Papers Prepared for Three Regional Conferences*. Washington, DC: National Commission for Manpower Policy, December 1976, p. 183.

Congressional Budget Office. *Dislocated Workers: Issues and Federal Options*. Washington, DC: U.S. Government Printing Office, July 1982.

Cook, D. D. "Reagan's Ax Is Falling on Job Training." *Industry Week*, 16 (November 1981): 19.

Drucker, P. F. "The Re-Industrialization of America." *The Wall Street Journal*, 13 June 1980.

Eberle, W. D., and Moller, J. V. "Industrial Objectives: The Right Course for the United States." *Journal of Contemporary Business* 11, no. 1 (1973): 25.

Employment and Training Report of the President, 1979, p. 304.

Evans, R. N. "Public Secondary and Postsecondary Vocational Education." *Job Training for Youth*, edited by R. E. Taylor, H. Rosen, and F. Pratzner. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University, 1982.

Gilli, A. C., Sr. "Career Education: Expanding the Role of Vocational Education." *Business Education World* 58 (May-June 1978): 29.

Gordus, J. P.; Jarley, P.; and Ferman, L. A. *Plant Closings and Economic Dislocation*. Kalamazoo, MI: W. E. Upjohn Institute for Employment Research, 1981.

Henderson, R. P. "High Technology: Help Wanted." *Enterprise* 6 (March 1982): 2-5. Newsletter of The National Association of Manufacturers, Washington, DC.

The Heritage Foundation. Issue Bulletin on *The Job Training Act of 1982 (S.2184)*. Washington, DC, 6 May 1982.

Hershman, A., and Levenson, M. "The Reindustrialization of America?" *Dun's Review* 116 (July 1980): 34.

"How Auto Imports Have Displaced U.S. Workers." *Industry Week*, 14 June 1982, p. 81.

Kalleberg, A. L. "Work: Postwar Trends and Future Prospects." *Business Horizons*, July-August 1982, p. 81.

Kerr, C., and Rosow, J. M., eds. *Work in America: The Decade Ahead*. The final report of a symposium in San Francisco, CA on 13-15 December 1978, sponsored by the Work in America Institute, Inc.

King, G. "Statistical Abstract 1979." Unpublished data. Washington, DC: U.S. Bureau of the Census, 1979.

Leach, J. E. "Vocational Education for Occupational Maintenance and Advancement." *Journal of Studies in Technical Careers* 2 (Fall 1980): 741.

Levine, M., and Doyle, D. P. "Private Meets Public: An Examination of Contemporary Education." *Meeting Human Needs: Toward A New Public Philosophy*. Washington, DC: American Enterprise Institute for Public Policy Research, 1982.

Lincoln, C. I. *ASTD National Report for Training and Development*, 17 July 1981. Newsletter article on the testimony during the 15 June 1981 hearings conducted by the U.S. Senate Subcommittee on Employment and Productivity.

Main, J. "Work Won't Be the Same Again." *Fortune*, 28 June 1982, p. 58.

Maurice, C. "Multi-Agency System Linkages and Coordination." *Contemporary Challenges for Vocational Education*. Arlington, VA: American Vocational Association, 1981.

Milbergs, E. "Productivity: Decline Need Not Lead to a Fall." *Enterprise*. Washington, DC: National Association of Manufacturers, June 1982.

National Association of Manufacturers. "America's Human Resources Keys to Productivity." *Perspective on National Issues*. Washington, DC: National Association of Manufacturers, April 1982.

National Association for Industry-Education Cooperation. *Industry Education Councils: A Handbook*. Buffalo, NY: National Association for Industry-Education Cooperation, 1972.

O'Toole, J. *Work, Learning and the American Future*. San Francisco, CA: Jossey-Bass, 1978.

Pierson, F. C. *The Minimum Level of Unemployment and Public Policy*. Kalamazoo, MI: W. E. Upjohn Institute for Employment Research, 1980, p. 130.

Pratzner, F. C. "Occupational Adaptability and Transferable Skills." A project final report. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University, January 1978.

Pryde, P. L., Jr. "Incentives to Economic Development." *Meeting Human Needs: Toward A New Philosophy*. Washington, DC: American Enterprise Institute for Public Policy Research, 1982.

"Retraining Displaced Workers: Too Little, Too Late?" *Business Week*, 19 July 1982, p. 178.

"The Second War Between the States." *Business Week*, 17 May 1976, p. 94.

Shellenbarger, S. "Societal Shift: As More Women Take Jobs, They Affect Ads, Politics, Family Life." *The Wall Street Journal*, 29 June 1982.

Stewart, P. L., and Cantor, M. G., eds. *Varieties of Work*. Beverly Hills, CA: Sage Publications, 1982.

Starr, H.; Merz, H.; and Zahniser, G. *Using Labor Market Information in Vocational Education Planning and Evaluation*. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University, 1982.

U.S. Department of Education. *Manpower-Education Coordination: Two Decades of Frustration*. Washington, DC, 1981.

U.S. Department of Labor. "The Job Outlook for College Graduates During the 1980s." *Occupational Outlook Quarterly*, Summer 1982, p. 2.

Vocational Education Reauthorization: A Time for Redirection. A position paper. State Advisory Council on and for Vocational Education, 5 December 1981.

Wilson, J. W. "The Economy." *Business Horizons* 25 (January-February 1981): 9.